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| 09/456,516 | 12/08/1999 | KLAUS MULLER | 732/000012 | 6567 |

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| EXAMINER |
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TSOY, ELENA

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| ART UNIT | PAPER NUMBER |
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1762

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/456,516

Applicant(s)

MULLER ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on January 7, 2002, February 11, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

Response to Amendment

1. Amendment filed on January 7, 2001 has been entered.

Specification

2. Objection to the arrangement of the specification has been withdrawn.

Claim Objections

3. Claims 3, 4, 8, 9 are objected to because of the following informalities:

Claim 3, line 1, "3 A layered composite" should be changed to -- 3. A layered composite --.

Claim 4, line 1, "in plaim 1" should be changed to -- in claim 1 --.

Claim 8, line 1, "in .claim 1" should be changed to -- in claim 1 --.

Claim 9, line 3, "duri g" should be changed to -- during --.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 3, 4, 8-10** are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 5,139,854).

Johnson discloses a layered composite with a decorative surface and comprising a backing layer 4 of a flexible thermoformable (thermoplastic) polymer which is not polypropylene (See Fig. 2; column 9, lines 64-69), a decorative layer 2 arranged thereupon (See

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Fig.2; column 6, lines 6-22; column 7, lines 59-60) and a heat-cured layer 1 applied to the decorative layer 2 (See column 7, lines 13-15) wherein the total thickness of the layered composite is from 140 to 1450 microns (0.14-1.45 mm) and whose backing layer 4 makes up at least 80 % of the thickness (See column 6, lines 51-64).

As to claim 3, an intermediate layer 3 is also inserted as bonding material between backing layer 4 and the decorative layer 2. See Fig.2; column 6, lines 22-29.

As to claim 4, a thermoplastic polymer is polystyrene. See Fig. 2; column 9, lines 64-69.

As to claim 8, the decorative layer 2 is composed of a polymeric material, which has an embossment or coloration or combination of both. See Fig.2; column 6, lines 11-14.

As to claim 9, the heat-cured layer 1 arranged on the decorative layer 2 is composed of a thermosetting polymeric material, crosslinked by exposure to pressure or heat during the production of the layered composite. See column 7, lines 13-14, 28-41.

As to claim 10, the layered composite with a decorative surface further comprises a 500-25,000 micron thick additional backing layer 5 of a rigid thermoplastic polymer (See column 6, lines 26-29, 44-45), so that the total thickness of the layered composite is from 640 to 26,450 microns (0.64-26.45 mm) and whose backing layer 4, 5 makes up at least 90 % of the thickness.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. **Claims 1, 2** are rejected under 35 U.S.C. 103(a) as being unpatentable over DeRenzo et al (US 5,851,931) in view of Tyner (US 5,486,391) and Miyakoshi (US 5,827,788).

DeRenzo discloses a layered composite with at least one decorative surface and comprising a backing layer 10 of a thermoplastic polymer, which is not polypropylene, a decorative layer 12, 14 (e.g. fabric material, See column 2, lines 67; column 3, lines 1-5) arranged on both sides of the backing layer 10 (See Fig. 1; column 2, lines 34-44) and a layer of sealer (e.g. water based polyurethane) applied to the decorative layer 12, 14 to ensure washability (See column 3, lines 4-14, 36-38), wherein the total thickness of the layered composite is from 0.015 to 0.04 inches (0.38-1.016 mm) and whose backing layer 10 makes up about 60 % of the thickness (See column 1, lines 44-50).

DeRenzo fails to teach that the backing layer makes up at least 80 % of the thickness, and the layer of sealer is a heat-cured layer.

As to the backing layer being of at least 80 % of the thickness, Tyner teaches that the thickness of a core (backing) layer 12 may vary depending on the overall size of a panel (a layered composite) 10 and the specific use of the decorative composite (See column 4, lines 29-32). In general, the thickness of the core (backing) layer 12 having decorative layers 18 (e.g. of fabric material, See column 7, lines 18-19) arranged on both sides of the backing layer 12 is 1/2 – 4 inches (See column 4, lines 31-32). Therefore, the thickness of a backing layer is a result-effective variable in the layered decorative composite art, which depends on the overall size of a the layered composite and the specific use of the decorative composite. It is held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the

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optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined by routine experimentation the optimum thickness of a backing layer (including claimed at least 80 % of the total thickness) in a layered decorative composite depending on the overall size of a the layered composite and the specific use of the decorative composite.

As to the layer of sealer being a heat-cured layer, Miyakoshi teaches that a heat-cured layer applied to the decorative fabric layer (See Fig.3; column 6, line 46; column 7, line 20; column 12, lines 18-31) prevents fussing in the decorative fabric layer and improves abrasion resistance of the decorative fabric layer (See column 6, lines 48-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted a layer of sealer covering decorative fabric layers of DeRenzo with a heat-cured layer of Miyakoshi with the expectation of providing the desired prevention of fussing in the decorative fabric layers and improvement in abrasion resistance of the decorative fabric layers, as taught by Miyakoshi.

8. **Claim 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 5,139,854) in view of Miyakoshi (US 5,827,788).

Johnson, as been discussed in paragraph 5, further teaches that a backing layer of a decorative laminate can be made from polystyrene. See column 9, lines 64-68.

Johnson fails to teach that the backing layer is polybutylene terephthalate backing layer.

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Miyakoshi teaches that polystyrene is functionally equivalent to polybutylene terephthalate for making a backing layer of a decorative laminate. See column 4, lines 41-42, 49-51.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used polybutylene terephthalate for making a backing layer of a decorative laminate of Johnson since Miyakoshi teaches of the equivalence of polybutylene terephthalate and polystyrene for their use as a backing layer in the decorative laminate art and selection of any of these materials to form a backing layer of a decorative laminate would be within the level of ordinary skill in the art. To substitute polystyrene in Johnson for polybutylene terephthalate of Miyakoshi would have been an obvious functional equivalent.

9. **Claim 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 5,139,854) in view of Pelzer (US 6,019,923).

Johnson, as been discussed in paragraph 5, further teaches that a backing layer can be made from polyethylene. See column 9, lines 64-65.

Johnson fails to teach that the backing layer of a decorative laminate is made from polyoxymethylene.

Pelzer teaches that polyethylene is functionally equivalent to polyacetals (polyoxymethylene) for making a backing layer of a decorative laminate. See column 5, lines 11-12, 22-27.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used polyoxymethylene for making a backing layer of a decorative laminate of Johnson since Pelzer teaches of the equivalence of polyoxymethylene and polyethylene for their

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use in the decorative laminate art and selection of any of these materials to form a backing layer of a decorative laminate would be within the level of ordinary skill in the art. To substitute polyethylene in Johnson for polyoxymethylene of Pelzer would have been an obvious functional equivalent.

10. **Claims 1, 7, 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Welz (US 4,262,051) in view of Miyakoshi (US 5,827,788).

Welz discloses a layered composite with a decorative surface comprising a backing layer (a) of a thermoplastic polymer, which is not polypropylene, a decorative layer (c) arranged on the backing layer (a) (See column 1, lines 32-39; column 2, lines 5-6), wherein the total thickness of the layered composite is from 0.55 to 10 mm and whose backing layer (a) makes up at least 90 % of the thickness (See column 1, lines 67-68; column 2, lines 1, 56-58). The backing layer comprises from 10-60 % by weight of reinforcing material such as glass fibers, glass beads, talc, chalk, fine particles of wood, etc. See column 2, lines 27-33.

Welz fails to teach that the decorative layer (c) is covered with a heat-cured layer.

Miyakoshi teaches that a heat-cured layer applied to the decorative layer (See Fig.3; column 6, line 46; column 7, line 20; column 12, lines 18-31) improves abrasion resistance of the decorative layer (See column 6, lines 48-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered a decorative layer of Welz with a heat-cured layer of Miyakoshi with the expectation of providing the desired improvement in abrasion resistance of the decorative layer, as taught by Miyakoshi.

Response to Arguments

11. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

ET

Elena Tsoy
Examiner
Art Unit 1762

March 11, 2002



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